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Attorney Docket No.: 5443.424-US

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of: Cherry et al.

Confirmation No: 7060

Serial No.: 09/607,142

Group Art Unit: 1652

Filed: June 29, 2000

Examiner: Fronda, C

For: Maltogenic Alpha-Amylase Variants

AMENDMENT UNDER 37 C.F.R. 1.111

Commissioner for Patents
Washington, DC 20231

Sir:

In response to the Office Action mailed September 11, 2001, please amend the above-identified application as follows (a marked up version pursuant to 37 C.F.R. 1.21 is attached hereto):

IN THE CLAIMS:

Please cancel claims 1-4 and 6-9 without prejudice or disclaimer.

Please substitute the following amended claim 5 for the pending claim having the same claim number:

5. (Amended.) A method of constructing a variant of a parent maltogenic alpha-amylase, wherein said parent maltogenic alpha-amylase has an amino acid sequence which is at least 70% identical to SEQ ID NO:1, which method comprises:

- B₁
- a) modeling the parent alpha-amylase on the three-dimensional structure of SEQ ID NO: 1 depicted in the Appendix to produce a three-dimensional structure of the parent alpha-amylase;
 - b) identifying an amino acid residue which is within 15 Å from an active site residue of the parent amylase in the three-dimensional structure of said parent, and which is involved in electrostatic or hydrophobic interactions with an active site residue;